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IS 10528 (1983): Method of sampling empty paper sacks for testing [CHD 15: Paper and its products]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Indian Standard

METHOD OF SAMPLING
EMPTY PAPER SACKS FOR TESTING

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INDIAN STANDARDS INSTITUTION
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NEW DELHI 110002

*Indian Standard*METHOD OF SAMPLING
EMPTY PAPER SACKS FOR TESTING

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Indian Standard

METHOD OF SAMPLING EMPTY PAPER SACKS FOR TESTING

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 28 February 1983, after the draft finalized by the Paper and Flexible Packaging Sectional Committee had been approved by the Marine, Cargo Movement and Packaging Division Council.

0.2 Method of sampling laid down in this standard is based on the sampling procedures given in IS : 2500 (Part II)-1965*.

0.3 This standard does not specify the details of tests and the number of paper sacks to be subjected to a particular test as the specification on the paper sacks is under preparation and will take some time for printing. Such details along with the sequence of testing shall be covered in the specification.

1. SCOPE

1.1 This standard specifies the method of obtaining a representative sample of empty paper sacks for testing to assess the average quality of a consignment of empty sacks.

2. DEFINITIONS

2.0 For the purpose of this standard, the following definitions shall apply.

2.1 Lot — The aggregate of sacks of a single kind with specified characteristics, about which it is desired to make a judgement (usually as to compliance with specification) and which are available for sampling.

NOTE 1 — The number of sacks comprising a lot may be indicated by the invoice or as agreed to between the purchaser and the supplier.

NOTE 2 — When the supplied lot size is less than the lot size indicated on the invoice, the actual lot size supplied may be taken into account for the purpose of sampling.

*Sampling inspection tables : Part II Inspection by variables for percent defective.

2.2 Unit — A lot comprises one or more nominally identical units. The unit may be in the form of a bundle, bale, pallet load, container load, etc.

2.3 Element — A unit comprises one or more nominally identical elements. The element may be in the form of a bundle, bale, pallet, load, etc. It cannot be a single sack.

2.4 Sample — A specified number of sacks selected according to a prescribed procedure to represent the lot.

2.5 Selected at Random — Taken in such a way that each part of the whole has an equal chance of being selected. In order to ensure the randomness of selection, a random number table (*see* IS : 4905 - 1968*) as agreed to between the purchaser and the supplier shall be used. In case such a table is not available the following procedure is recommended for use :

Starting from any unit, element or sack in the lot, count them in one order as 1, 2, 3,....., etc, up to r and so on where r is the integral part of N/n (N being the lot size and n being the sample size). Every r th unit, element or sack thus counted, shall be selected to constitute a sample.

3. PRINCIPLE

3.1 Select at random a prescribed number of sacks from the lot following a two-stage procedure:

First select a prescribed number of units from the lot (4.1).

Secondly use one of the following two procedures:

- a) Where the unit is not subdivided into elements, select a prescribed number of sacks from each of these units (4.2.1).
- b) Where the unit is subdivided into elements, select a prescribed number of elements from each of these units, then select a prescribed number of sacks from these elements (4.2.2).

4. PROCEDURE

4.1 Selection of Units — Determine and select the number of units to be sampled using Table 1.

4.1.1 The units selected shall be intact and in good external condition.

*Methods for random sampling.

TABLE 1 SAMPLING OF UNITS FROM A LOT

(Clause 4.1)

NUMBER OF UNITS (n) IN THE LOT	NUMBER OF UNITS SELECTED	METHOD OF SELECTION
(1)	(2)	(3)
1 to 5	All	—
6 to 99	5	At Random
100 to 399	n*	At Random
	20	
400 or more	20	At Random

* In deciding the number of units to be selected, any remainder of less than 20 units shall be ignored.

4.2 Selection of Sacks — For each unit selected from the lot, proceed as follows:

4.2.1 When the Unit is not Subdivided into Elements — Take at random an approximately equal number of sacks from each unit so that the total number taken from the lot is not less than the number of sacks required for testing and conforms to the requirements of Table 2.

TABLE 2 SAMPLING OF SACKS

NUMBER OF SACKS IN THE LOT	MINIMUM NUMBER OF SACKS TO BE TAKEN FROM THE LOT
Not more than 280	3
281 to 500	4
501 to 1 200	5
1 201 to 3 200	7
3 201 to 10 000	10
10 001 to 35 000	15
More than 35 000	20

4.2.2 When the Unit is Subdivided into Elements — If there are more than 20 elements in one unit, all the sampled units are to be assembled and elements are to be drawn according to Table 1. Select the elements in the same way that the units were selected. It shall be further ensured that at least one element from each selected unit according to Table 1 is taken for sampling.

5. ADDITIONAL REQUIREMENTS

5.1 Precaution — The sacks selected shall be preserved and handled in such a way that their properties will not permanently change before testing.

5.2 Marking — Each sack that has been selected shall be provided with identification marks sufficient to ensure that its provenance is known.

5.3 Resampling

5.3.1 If, as a result of an accident during sampling or testing resampling is necessary, a new sample shall be taken following the above procedure. Selection may, however, be made from the same units as before unless agreed otherwise.

5.3.2 If resampling is needed for any other reason, the procedure adopted should follow this specification as closely as possible.

6. REPORTING

6.1 The report shall indicate the following particulars:

- a) Reference to this standard;
- b) Names and addresses of the purchaser and vendor;
- c) Date and place of sampling;
- d) Description of the lot;
- e) Number of units in the lot;
- f) Number of units selected;
- g) Number of elements, if any, in a unit;
- h) Number of elements selected;
- j) Number of sacks in the lot;
- k) Number of sacks selected;
- m) All the circumstances which might influence results of future tests;
- n) Reference corresponding to the identification marks on the sacks;
- p) Signature of the person carrying out the sampling; and
- q) Any deviation from this standard.

AMENDMENT NO. 1 OCTOBER 1985

TO

IS:10528-1983 METHOD OF SAMPLING EMPTY PAPER
SACKS FOR TESTING

(Page 3, clause 0.2) - Delete.

(Page 5, clause 4.1, Table 1, col 2) - Substitute
' $\frac{n^}{20}$ ' for ' $\frac{n^*}{20}$ '.*

(MCPD 14)

Reprography Unit, ISI, New Delhi, India